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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/449,643	11/30/1999	JAMES WICHELMAN	10001192	6526
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AGILENT TECHNOLOGIES, INC. INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT. P.O. BOX 7599 M/S DL429 LOVELAND, CO 80537-0599				
			EXAMINER GUTIERREZ, ANTHONY	
			ART UNIT 2857	PAPER NUMBER

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/449,643

Applicant(s)

WICHELMAN ET AL

Examiner

Anthony Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, 11-16, 18, 21, 22, 24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartzman et al. (US Patent 6,385,773 B1) in view of Chen (US Patent 6,570,913 B1).

As to claims 1, 2, 11-16, 18, 21, 22, 24, and 25, Schwartzman et al. discloses a method that includes the use of a computer readable medium having a program for monitoring electrical signals (col. 8, line 66-col. 9, line 11) communicated along a plurality of nodes providing signal channels pursuant to a single channel plan, said channel plan having characteristics for each of the signal channels (Figures 1 and 2A, element 108, see also Fig. 3, with related discussion col. 10, lines 15-65, which discloses a channel transition procedure that is provided to obtain correlated power level data related to each of the frequency channels, using an analysis of one upstream frequency channel at a time, and that a threshold bit error rate is predetermined relative to a noise level of a frequency channel) comprising testing communication of the signals on the nodes by conducting a test plan, said test plan prescribing measurement of at least one test on at least one node (col. 9, line 59-col. 10, line 14,

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and Fig. 3, box 302); comparing the results from said one test with a user definable alarm time limit (Fig. 3, boxes 304, 306, and 308); and performing a failure time spectrum scan, using a spectrum analyzer, on said one node when said test results exceed said alarm limit (Fig. 3, box 310), said failure time spectrum scan representative of power versus frequency over the frequency spectrum of said node (col. 6, lines 7 and 8, col. 9, lines 3-7, and col. 10, lines 21-24). Schwartzman further implies storing the scan in a database and adjusting the start and stop frequencies of the scan based on the channel under test at the time the alarm was exceeded (col. 2, lines 43-52, and col. 10, line 59-col. 11, line 6).

Schwartzman discloses (in the cited passages and Figures) a test which compares (bit error rate (BER) comparison) actual measured values from monitoring the signals (detected BER) with expected values indicated by the predefined characteristics of the channel plan (predetermined threshold BER relative to a noise level of a frequency channel) and thereby produces a test result (which serves to determine whether or not a spectrum analyzer searches for a cleaner or preferred frequency channel having a lower noise level). Schwartzman does not specifically state that the test is automated.

It would have been obvious, however, to one having ordinary skill in the art at the time the invention was made to automate the test, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Schwartzman further implies the use of a switch capable of connecting one of said nodes with the spectrum analyzer (col. 5, lines 9-15 and col. 11, lines 21-23). While Schwartzman discloses a spectrum analyzer that is representative of power amplitude versus frequency as addressed above, Schwartzman et al. does not specifically state that a plot is generated and displayed.

Chen, however, specifically shows a generated plot of power amplitude versus frequency (Fig. 4A). Chen uses this plot to determine the carrier-to-noise ratio threshold in order to select a free band set (col. 11, lines 6-38).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to actually generate and display the plot of amplitude versus frequency from the data obtained from the spectrum analyzer to allow a user access to the information in a meaningful way in order to more accurately select a noise free band.

As to claim 3, Schwartzman et al. discloses that the scan is performed over the entire frequency spectrum of the node (col. 10, lines 21-24).

As to claim 4, Schwartzman et al. discloses that the nodes are part of a cable television network (col. 6, lines 54-57).

As to claim 6, Schwartzman discloses that the test is selected from the group consisting of total node power, carrier-to-noise power, percent availability, average noise power channel power, and burst count (col. 9, line 53-col. 10, line 14).

3. Claims 5, 7-10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartzman et al. (US Patent 6,385,773 B1) in view of Chen (US Patent 6,570,913 B1), further in view of Sprenger et al. (US Patent 5,861,882).

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The combination of Schwartzman et al. and Chen disclose generating a plot of power amplitude versus frequency for a spectrum analyzer scan performed on a system comprising a plurality of nodes as addressed above.

The combination does not specifically disclose the use of a graphical user interface.

Sprenger et al., however, teaches an integrated test measurement means that employs a graphical user interface (Title). The interface allows control of adjustable and selectable parameters to a user (col. 8, line 66-col. 9, line 21 and Fig. 4) and further generates a plot of data for a spectrum analyzer (Fig 2 and col. 6, lines 51-67). The system provides for storing test configurations and settings that can be recalled for repeated testing (col. 12, lines 18-42). This system is meant to provide means to overcome the limitations taught by Sprenger et al., known in the art including providing test system that are entirely software programmable that can be reconfigured without the need to disassemble, rearrange and reconnect the test elements into a new test configuration by hard wiring or the like (col. 2, lines 43-49).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention, in view of teaching of Schwartzman et al. that a headend of an HFC cable system can typically service 40,000 subscribers on up to 80 nodes (col. 2, lines 43-52), to employ the system of Sprenger et al. for the combination of Schwartzman et al. And Chen, in order to rapidly and easily reconfigure the test elements when scanning for frequency channels to transition to.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 14, 15, 21, 24, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 and 19 of U.S. Patent No. 6,522,987 B1, in view of Chen (US Patent 6,570,913 B1).

Claims 6 and 19 of the patent reference discloses all the features of independent claims 1, 14, 15, 21, 24, and 25 of the present application, with the exception of generating a plot of amplitude versus frequency over the frequency spectrum of said node, when it is understood that the percent availability result of claim 6 is determined by recording the node frequency spectrum amplitude over time as taught in claim 19.

Chen, however, specifically shows a generated plot of power amplitude versus frequency (Fig. 4A). Chen uses this plot to determine the carrier-to-noise ratio threshold in order to select a free band set (col. 11, lines 6-38).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to actually generate and display the plot of amplitude versus frequency

from the data obtained from the spectrum analyzer to allow a user access to the information in a meaningful way in order to more accurately select a noise free band.

6. Claims 1, 14, 15, 21, 24, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,741,947 B1 in view of Chen (US Patent 6,570,913 B1).

Claim 7 of the patent reference discloses all the features of independent claims 1, 14, 15, 21, 24, and 25 of the present application including the use of a spectrum analyzer, with the exception of generating a plot of amplitude versus frequency over the frequency spectrum of said node.

Chen, however, specifically shows a generated plot of power amplitude versus frequency (Fig. 4A). Chen uses this plot to determine the carrier-to-noise ratio threshold in order to select a free band set (col. 11, lines 6-38).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to actually generate and display the plot of amplitude versus frequency from the data obtained from the spectrum analyzer to allow a user access to the information in a meaningful way in order to more accurately select a noise free band.

7. Claims 1, 14, 15, 21, 24, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, and 4 of U.S. Patent No. 6,853,932 B1, in view of Chen (US Patent 6,570,913 B1).

Claims 1, 3, and 4, of the patent reference discloses all the features of independent claims 1, 14, 15, 21, 24, and 25 of the present application, with the

exception of generating a plot of amplitude versus frequency over the frequency spectrum of said node.

Chen, however, specifically shows a generated plot of power amplitude versus frequency (Fig. 4A). Chen uses this plot to determine the carrier-to-noise ratio threshold in order to select a free band set (col. 11, lines 6-38).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to actually generate and display the plot of amplitude versus frequency from the data obtained from the spectrum analyzer to allow a user access to the information in a meaningful way in order to more accurately select a noise free band.

Response to Arguments

8. Applicant's arguments filed 4/11/05 and entered along with amendment to the claims by the Request for Continued Examination filed 5/17/05, have been fully considered but they are not persuasive.

Applicant has amended the claims to overcome the cited references. The Examiner believes that the Applicant's amendment fails to overcome the references relied on in the rejection of record. In order to properly address this, the Examiner has included Applicant's amended claim language in the rejection above, indicating in those instances, an explanation as to the Examiner's interpretation of the language and the disclosure of the references.

The Terminal Disclaimer filed to overcome the standing Double Patenting rejections, remains disapproved as addressed below.

Terminal Disclaimer

9. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321 (b) and/or (c).

The Terminal Disclaimer is disapproved because the attorney on the Terminal Disclaimer is not of record.

As per Applicant's request, the Examiner has provided the following support for this requirement:

37 CFR 1.321 Statutory disclaimers, including terminal disclaimers.

(b) An applicant or assignee may disclaim or dedicate to the public the entire term, or any terminal part of the term, of a patent to be granted. Such terminal disclaimer is binding upon the grantee and its successors or assigns. The terminal disclaimer, to be recorded in the Patent and Trademark Office, must:

(1) Be signed:

(i) By the applicant, or

(ii) If there is an assignee of record of an undivided part interest, by the applicant and such assignee, or

(iii) If there is an assignee of record of the entire interest, by such assignee, or

(iv) **By an attorney or agent of record;**

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

United States Patent US 6,895,043 B1 to Naegeli et al., discloses a method and apparatus for measuring quality of upstream signal transmission of a cable modem by comparing FFT measurements of normal time slots to dummy time slots.

United States Patent US 6,775,840 B1 to Nigel et al. discloses a device, system and method for locating clean channels for upstream data carriers using a spectrum analyzer for noise level determination.

United States Patent US 6,757,908 B1 to Vogel, discloses the use of a graphical representation of impairment or other conditions, including signal to noise ratio, in a data-over-cable system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG
Anthony Gutierrez

6/21/05

